AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (CURRENTLY AMENDED) Optical fiber transmission system, comprising a transmitter terminal ~~(10)~~ launching an optical signal into a fiber line, said fiber line guiding said signal to a receiver terminal, said signal being composed of a multitude of bit-patterns at different wavelength channels within a given total bandwidth of wavelengths,

characterized in that :

- the fiber line ~~consists~~comprises, in its first section, of at least two branches ~~(12a, 12b)~~,

- said transmitter ~~(10)~~ launching into each one of said branches ~~(12a, 12b)~~ a separate part of said optical signal being composed of a sub-multitude of said bit-patterns at neighbouring wavelength channels within non-overlapping bandwidth domains,

- said parts of the signal being multiplexed together into ~~one unique~~ a fiber ~~(14)~~ by means of a multiplexer station ~~(13)~~ not closer to said transmitter terminal ~~(10)~~, than the sum of the total optical powers guided by each of the branches ~~(12a, 12b)~~ plus the losses due to the multiplexing has decreased below the total optical power, that is associated with a maximum optical power budget in said ~~unique~~ fiber ~~(14)~~ guiding the full bandwidth of wavelengths.

2. (ORIGINAL) Transmission system according to claim 1, characterized in that the full bandwidth of wavelength is split into two domains.

3. (CURRENTLY AMENDED) Transmission system according to claim 2, characterized in that the ~~the~~ C-band of approximately 1529 – 1562 nm and the L-band of approximately 1569 – 1604 nm are used as bandwidth domains launched into dedicated fiber branches ~~(12a, 12b)~~.

4. (CURRENTLY AMENDED) Transmission system according to claim 1, characterized in that the two fiber branches ~~(12a, 12b)~~ are embedded in the same terrestrial fiber cable.

5. (CURRENTLY AMENDED) Transmission system according claim 1, characterized in that the ~~unique~~ fiber ~~(14)~~ is embedded in a submarine fiber cable.

6. (CURRENTLY AMENDED) Transmission system according to claim 1, characterized in that the multiplexer station ~~(13)~~ is situated closed to a beach line.

7. (NEW) An optical fiber transmission system, comprising:

a transmitter which launches an optical signal into a fiber line; and

a receiver; and

a multiplexer;

wherein said fiber line guides said optical signal to said receiver, and said signal comprises different wavelength channels within a given total bandwidth of wavelengths, and

wherein the fiber line comprises:

a first section having at least two fiber branches, wherein the transmitter launches into each one of said branches a separate part of said optical signal being composed of a sub-multitude of wavelength channels within non-overlapping bandwidth domains, and

said parts of said signal are multiplexed into a fiber by said multiplexer, wherein said multiplexer is not closer to said transmitter than the sum of the total optical powers guided by each of said branches plus the losses due to the multiplexing that has decreased below the total optical power that is associated with a maximum optical power budget in said fiber guiding the full bandwidth of wavelengths.

8. (NEW) The transmission system according to claim 7, wherein the full bandwidth of wavelength is split into two domains.

9. (NEW) The transmission system according to claim 8, wherein the C-band of approximately 1529 – 1562 nm and the L-band of approximately 1569 – 1604 nm are used as bandwidth domains launched into the fiber branches.

10. (NEW) The transmission system according to claim 7, wherein the at least two fiber branches are embedded in the same terrestrial fiber cable.

11. (New) The transmission system according claim 7, wherein the fiber is embedded in a submarine fiber cable.

12. (New) Transmission system according to claim 7, whereinthe multiplexer is situated closed to a beach line.